What is claimed is:

1. A method for producing fatty acid alcohol ester by conducting an ester interchange reaction between fats or oils and alcohol by applying ultrasonic irradiation at a frequency of 15 to 100 kHz and irradiation intensity of 0.5 to 20 W/cm^2 in the presence of a catalyst.

2. A method for producing fatty acid alcohol ester claimed in claim 1 in which a product is subjected to ultrasonic irradiation at a frequency of 200 to 3,000 kHz and irradiation intensity of 0.5 to 20 W/cm^2 to separate fatty acid alcohol and glycerol.

3. A method for producing fatty acid alcohol ester claimed in claim 2 in which ultrasonic irradiation is applied to an interface between fatty acid alcohol ester and glycerol.

4. A method for producing fatty acid alcohol ester claimed in claim 1 in which an amount of alcohol to be used is stoichiometrically 1 to 1.3 times of fats or oils.

5. A method for producing fatty acid alcohol ester claimed in claim 1 in which an amount of a catalyst to be used is 0.2 to 1.5 % by weight of fats or oils.

6. A method for producing fatty acid alcohol ester claimed in claim 1 in which fats or oils are at least rapeseed oil, olive oil, coconut oil, palm oil, animal fats or oils, fish oil and waste oils thereof.

7. A method for producing fatty acid alcohol ester claimed in claim 1 in which alcohol is methanol and/or ethanol.

8. A method for producing fatty acid alcohol ester claimed in claim 1 in which a catalyst is sodium hydroxide and/or potassium hydroxide.